SEQUENCE LISTING

<110> Herr, John C.
Norton, Elizabeth J.
Deikman, Alan B.

<120> Recombinant Antibody Directed Against Human Sperm Antigen

<130> 00415-02

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<150> 60/145,512
<151> 1999-07-23

<160> 18

<170> PatentIn Ver. 2.1

<210> 1
<211> 116
<212> PRT
<213> Mus musculus

<400> 1

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Asn	Arg	Asp	Thr	Tyr	Leu	His	Trp	Phe	Leu	Gln	Lys	Pro	Gly	Gln	Ser
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Pro	Glu	Leu	Leu	Ile	Tyr	Arg	Val	Ser	Asn	Arg	Phe	Ser	Gly	Val	Pro
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Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Lys	Ile
65					70					75					80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Ser
85 90 95

Thr His Val Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
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Arg Ala Ala Ala
115

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<211> 348
<212> DNA
<213> Mus musculus

<400> 2
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atctcttgca gatctagtca gagtcttgta cacagtaata gagacactta tttacattgg 120

ttcctgcaga agccaggcca gtctccagag ctcctgatct acagagtttc caaccgattt 180

tctggggtcc cagacaggtt cagtggcagt ggatcaggga cagatttcac actcaagatc 240

agcagagtgg aggctgagga tctgggagtt tatttctgtt ctcaaagtac acatgttcca 300

ttcacgttcg gctcggggac caagctggaa atcaaacggg cggccgca 348

<210> 3
<211> 118
<212> PRT
<213> Mus musculus

<400> 3
Gln Val Lys Leu Gln Gln Pro Gly Ser Glu Pro Val Arg Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Arg Ala Ser Gly Tyr Lys Phe Thr Thr Tyr
20 25 30

Trp Met His Trp Val Arg Gln Arg Pro Gly Gln Gly Pro Glu Trp Ile
35 40 45

Gly Asp Ile Tyr Pro Gly Ser Gly Asp Ser Asn Tyr Asp Val Lys Phe
50 55 60

Lys Asn Lys Ala Thr Leu Thr Val Asp Thr Ser Ser Ser Thr Val Tyr
65 70 75 80

Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Asp Tyr Gly Cys Pro Phe Val Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser
115

<210> 4
<211> 354
<212> DNA
<213> Mus musculus

<400> 4
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tcctgcaggg cttctggcta caaattcacc acctactgga tgcactgggt gaggcagagg 120

cctggacaag gccctgagtg gattggagat atttatcctg gtagtggtga ttctaactac 180

gatgtgaagt tcaagaacaa ggccacactg actgtagaca catcctccag cacagtttac 240

atacaactca gcagcctgac atctgaggac tccgcggtct attactgtgc aagaggggac 300

tatggttgcc cttttgttta ctggggccaa ggcaccacgg tcaccgtctc cagt 354

<210> 5
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:peptide linker

<400> 5
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1 5 10 15

<210> 6
<211> 100
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 6
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ggcggcagcg acatcgagct cactcagtct ccattctccc 100

<210> 7
<211> 100
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer

<400> 7
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cgctgccgcc gccgccactg gagacggtga ccgtggtgcc 100

<210> 8
<211> 264
<212> PRT
<213> Mus musculus

<400> 8
Met Ala Gln Val Lys Leu Gln Gln Pro Gly Ser Glu Pro Val Arg Pro
1 5 10 15

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Gly Ala Ser Val Lys Val Ser Cys Arg Ala Ser Gly Tyr Lys Phe Thr
            20                  25                  30

Thr Tyr Trp Met His Trp Val Arg Gln Arg Pro Gly Gln Gly Pro Glu
        35                  40                  45

Trp Ile Gly Asp Ile Tyr Pro Gly Ser Gly Asp Ser Asn Tyr Asp Val
    50                  55                  60

Lys Phe Lys Asn Lys Ala Thr Leu Thr Val Asp Thr Ser Ser Ser Thr
65                  70                  75                  80

Val Tyr Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr
                85                  90                  95

Tyr Cys Ala Arg Gly Asp Tyr Gly Cys Pro Phe Val Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Asp Ile Glu Leu Thr Gln Ser Pro Phe
    130                 135                 140

Ser Leu Pro Val Ser Leu Gly Gly Pro Ala Ser Ile Ser Cys Arg Ser
145                 150                 155                 160

Ser Gln Ser Leu Val His Ser Asn Arg Asp Thr Tyr Leu His Trp Phe
                165                 170                 175

Leu Gln Lys Pro Gly Gln Ser Pro Glu Leu Leu Ile Tyr Arg Val Ser
            180                 185                 190

Asn Arg Phe Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Leu Gly
    210                 215                 220

Val Tyr Phe Cys Ser Gln Ser Thr His Val Pro Phe Thr Phe Gly Ser
225                 230                 235                 240

Gly Thr Lys Leu Glu Ile Lys Arg Ala Ala Ala Gly Ala Pro Val Pro
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Tyr Pro Asp Pro Leu Glu Pro Arg
260

<210> 9
<211> 792
<212> DNA
<213> Mus musculus

<400> 9
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aaggtgtcct gcagggcttc tggctacaaa ttcaccacct actggatgca ctgggtgagg 120

cagaggcctg gacaaggccc tgagtggatt ggagatattt atcctggtag tggtgattct 180

aactacgatg tgaagttcaa gaacaaggcc acactgactg tagacacatc ctccagcaca 240

gtttacatac aactcagcag cctgacatct gaggactccg cggtctatta ctgtgcaaga 300

ggggactatg gttgcccttt tgtttactgg ggccaaggca ccacggtcac cgtctccagt 360

ggcggcggcg gcagcggtgg tggtggttct gggggcggcg gcagcgacat cgagctcact 420

cagtctccat tctccctgcc tgtcagtctt ggaggtccag cctccatctc ttgcagatct 480

agtcagagtc ttgtacacag taatagagac acttatttac attggttcct gcagaagcca 540

ggccagtctc cagagctcct gatctacaga gtttccaacc gattttctgg ggtcccagac 600

aggttcagtg gcagtggatc agggacagat ttcacactca agatcagcag agtggaggct 660

gaggatctgg gagtttattt ctgttctcaa agtacacatg ttccattcac gttcggctcg 720

gggaccaagc tggaaatcaa acgggcggcc gcaggtgcgc cggtgccgta tccggatccg 780

ctggaaccgc gt 792

<210> 10
<211> 792
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic sequence substituting bacterial codons for mouse codons

<400> 10
atggcccagg tgaaactgca gcaacctggg tctgaaccgg tgcgccctgg cgcttcagtg 60

aaggtgtcct gccgcgcttc tggctacaaa ttcaccacct actggatgca ctgggtgcgc 120

cagcgccctg gccaaggccc tgagtggatt ggcgatattt atcctggtag tggtgattct 180

aactacgatg tgaagttcaa gaacaaggcc acactgactg tagacacatc ctccagcaca 240

gtttacatcc aactcagcag cctgacatct gaggactccg cggtctatta ctgtgcaaga 300

ggggactatg gttgcccttt tgtttactgg ggccaaggca ccacggtcac cgtctccagt 360

ggcggcggcg gcagcggtgg tggtggttct gggggcggcg gcagcgacat cgagctcact 420

cagtctccat tctccctgcc tgtcagtctt ggcgatccag cctccatctc ttgccgctct 480

agtcagagtc ttgtacacag taatcgcgac acctatctgc attggttcct gcagaagcca 540

ggccagtctc cagagctcct gatctaccgc gtttccaacc gcttttctgg ggtcccagac 600

cgcttcagtg gcagtggctc agggacagat ttcacactca agatcagcag cgtggaggct 660

gaggatctgg gcgtttattt ctgttctcaa agtacacatg ttccattcac gttcggctcg 720

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ctggaaccgc gt 792

<210> 11
<211> 251
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic sequence substituting amino acids in the natural

mouse protein to "humanize" the protein

<400> 11

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Met Ala Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Pro
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Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
            20                  25                  30

Thr Tyr Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu
        35                  40                  45

Trp Ile Gly Asp Ile Tyr Pro Gly Ser Gly Asp Ser Asn Tyr Asp Val
    50                  55                  60

Lys Phe Lys Asn Arg Val Thr Ile Thr Ala Asp Thr Ser Thr Ser Thr
65                  70                  75                  80

Ala Tyr Met Gln Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr
                85                  90                  95

Tyr Cys Ala Arg Gly Asp Tyr Gly Cys Pro Phe Val Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Ser
    130                 135                 140

Ser Leu Pro Val Ser Val Gly Asp Pro Ala Ser Ile Ser Cys Arg Ser
145                 150                 155                 160

Ser Gln Ser Leu Val His Ser Asn Arg Asp Thr Tyr Leu His Trp Tyr
                165                 170                 175

Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Val Ser
            180                 185                 190

Asn Arg Phe Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly
    210                 215                 220
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Val Tyr Tyr Cys Ser Gln Ser Thr His Val Pro Phe Thr Phe Gly Gln
225 230 235 240

Gly Thr Lys Val Glu Ile Lys Arg Ala Ala Ala
245 250

<210> 12
<211> 753
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic sequence substituting human codons for mouse codons

<400> 12
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aaagtttctt gcaaagcttc tggttatacc tttaccacgt attggatgca ttgggttcgt 120

caagctcctg gtcaaggtct ggaatggatt ggtgatattt atcctggttc tggtgattct 180

aattatgatg ttaaatttaa aaatcgtgtt accattaccg ctgatacctc tacctctacc 240

gcttatatgc aattatctag cttacgttct gaagataccg cagtttatta ttgtgcacgt 300

ggtgattatg gttgtccttt tgtttattgg ggtcaaggca ccacggttac cgtttctagc 360

ggtggcggcg gttctggcgg tggcggtagc ggcggtggtg gctctgatat tgttatgacc 420

caatctcctt ctagcttacc tgtttctgtt ggtgatcctg ctagcatttc ttgtcgttct 480

agccaatctt tagttcatag caatcgtgat acctatttac attggtatct gcagaaacct 540

ggtcaaagcc ctcaattact gatttatcgt gttagcaatc gttttagcgg tgttcctgat 600

cgtttttctg gtagcggttc tggtaccgat tttacgttaa aaatttctcg tgttgaagct 660

gaggatgttg gtgtttatta ttgttctcaa agcacccatg ttccttttac gttcggtcaa 720

ggtaccaaag ttgaaattaa acgtgctgca gct 753

<210> 13
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:nucleic acid linker

<400> 13
ggcggcggcg gcagcggtgg tggtggttct gggggcggcg gcagc 45

<210> 14
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:commercially available petide antigen

<400> 14
Gly Ala Pro Val Pro Tyr Pro Asp Pro Leu Glu Pro Arg
1 5 10

<210> 15
<211> 251
<212> PRT
<213> Mus musculus

<400> 15
Met Ala Gln Val Lys Leu Gln Gln Pro Gly Ser Glu Pro Val Arg Pro
1 5 10 15

Gly Ala Ser Val Lys Val Ser Cys Arg Ala Ser Gly Tyr Lys Phe Thr
20 25 30

Thr Tyr Trp Met His Trp Val Arg Gln Arg Pro Gly Gln Gly Pro Glu
35 40 45

```
Trp Ile Gly Asp Ile Tyr Pro Gly Ser Gly Asp Ser Asn Tyr Asp Val
     50                  55                  60

Lys Phe Lys Asn Lys Ala Thr Leu Thr Val Asp Thr Ser Ser Ser Thr
 65                  70                  75                  80

Val Tyr Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr
                85                  90                  95

Tyr Cys Ala Arg Gly Asp Tyr Gly Cys Pro Phe Val Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
        115                 120                 125

Gly Ser Gly Gly Gly Gly Ser Asp Ile Glu Leu Thr Gln Ser Pro Phe
    130                 135                 140

Ser Leu Pro Val Ser Leu Gly Gly Pro Ala Ser Ile Ser Cys Arg Ser
145                 150                 155                 160

Ser Gln Ser Leu Val His Ser Asn Arg Asp Thr Tyr Leu His Trp Phe
                165                 170                 175

Leu Gln Lys Pro Gly Gln Ser Pro Glu Leu Leu Ile Tyr Arg Val Ser
            180                 185                 190

Asn Arg Phe Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205

Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Leu Gly
    210                 215                 220

Val Tyr Phe Cys Ser Gln Ser Thr His Val Pro Phe Thr Phe Gly Ser
225                 230                 235                 240

Gly Thr Lys Leu Glu Ile Lys Arg Ala Ala Ala
                245                 250
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<210> 16
<211> 753
<212> DNA
<213> Mus musculus

<400> 16
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cagaggcctg gacaaggccc tgagtggatt ggagatattt atcctggtag tggtgattct 180

aactacgatg tgaagttcaa gaacaaggcc acactgactg tagacacatc ctccagcaca 240

gtttacatac aactcagcag cctgacatct gaggactccg cggtctatta ctgtgcaaga 300

ggggactatg gttgcccttt tgtttactgg ggccaaggca ccacggtcac cgtctccagt 360

ggcggcggcg gcagcggtgg tggtggttct gggggcggcg gcagcgacat cgagctcact 420

cagtctccat tctccctgcc tgtcagtctt ggaggtccag cctccatctc ttgcagatct 480

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aggttcagtg gcagtggatc agggacagat ttcacactca agatcagcag agtggaggct 660

gaggatctgg gagtttattt ctgttctcaa agtacacatg ttccattcac gttcggctcg 720

gggaccaagc tggaaatcaa acgggcggcc gca 753

<210> 17
<211> 786
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic sequence substituting bacterial codons for mouse codons

<400> 17
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cctggccaag gccctgagtg gattggcgat atttatcctg gtagtggtga ttctaactac 180

gatgtgaagt tcaagaacaa ggccacactg actgtagaca catcctccag cacagtttac 240

atccaactca gcagcctgac atctgaggac tccgcggtct attactgtgc aagaggggac 300

tatggttgcc cttttgttta ctggggccaa ggcaccacgg tcaccgtctc cagtggcggc 360

ggcggcagcg gtggtggtgg ttctgggggc ggcggcagcg acatcgagct cactcagtct 420

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agtcttgtac acagtaatcg cgacacctat ctgcattggt tcctgcagaa gccaggccag 540

tctccagagc tcctgatcta ccgcgtttcc aaccgctttt ctggggtccc agaccgcttc 600

agtggcagtg gctcagggac agatttcaca ctcaagatca gcagcgtgga ggctgaggat 660

ctgggcgttt atttctgttc tcaaagtaca catgttccat tcacgttcgg ctcggggacc 720

aagctggaaa tcaaacgggc ggccgcaggt gcgccggtgc cgtatccgga tccgctggaa 780

ccgcgt 786

<210> 18
<211> 7
<212> PRT
<213> Homo sapiens

<400> 18
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